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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/964,838

09/28/2001

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TPP 31424

3731

7590

08/10/2004

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EXAMINER

FONTAINE, MONICA A

ART UNIT

PAPER NUMBER

1732

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/964,838

Applicant(s)

NILSSON ET AL.

Examiner

Monica A Fontaine

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 26-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 26-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

This office action is in response to the Amendment filed 13 May 2004.

### ***Claim Objections***

Claim 54 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 54's range of pressures does not further limit the range in Claim 44.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 26-30, and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by MacQueen et al. (U.S. Patent 6,399,670). Regarding Claim 1, MacQueen et al., hereafter "MacQueen," show that it is known to carry out a process for the manufacture of a decorative surface element, which element comprises a base layer, a décor and a wear layer of a UV or electron beam curing lacquer (Abstract), said process comprising

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the steps of positioning one or more structured surfaces on top of the lacquer, providing embossing surfaces of one or more rollers or molds (Column 13, lines 12-15), pressing said one or more rollers or molds on to said lacquer, whereby the lacquer will be provided with a surface structure, the decorative effect of the décor (Column 13, lines 16-19), and thereafter, completely curing the wear layer (Column 13, lines 25-27).

Regarding Claim 26, MacQueen shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the lacquer consists of an acrylic lacquer (Column 5, lines 29-31; It is noted that “acrylate” is a polymer of acrylic molecules).

Regarding Claim 27, MacQueen shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the wear layer is applied in several steps with intermediate partial curing (Column 12, lines 1-16; Column 23, lines 31-34).

Regarding Claim 28, MacQueen shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the wear layer includes hard particles with an average particle size in the range of 50nm-150 $\mu$ m (Column 8, lines 41-48).

Regarding Claim 29, MacQueen shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the base layer consists of a particle board (Column 9, lines 22-25).

Regarding Claim 30, MacQueen shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the base layer consists mainly a polymer (Column 9, lines 22-24; Column 23, line 23).

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Regarding Claim 39, MacQueen shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein each structured roller is provided with a counter stay roller between which the surface element is passed (Column 23, lines 34-38).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 32, 40-41, 43, and 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacQueen.

Regarding Claim 32, MacQueen shows the process as claimed as discussed in the rejection of Claim 1 above, including using one or more rollers that are pressed towards the surface structured wear layer before the complete curing stage (Column 13, lines 12-19). Although he does not specifically use glazing rollers, he suggests that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to change the surface configuration of the rollers in order to obtain a desired final finish of the rolled article (i.e. provide a smooth "glazing" roller instead of one with raised designs), meeting applicant's claim.

Regarding Claim 40, MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 32 above, including a method wherein each roller is provided with a counter stay roller between which the surface element is passed (Column 23, lines

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34-38). Although he does not specifically use glazing rollers, he suggests that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to change the surface configuration of the rollers in order to obtain a desired final finish of the rolled article (i.e. provide a smooth "glazing" roller instead of one with raised designs), meeting applicant's claim.

Regarding Claim 41, MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 39 above, including a method wherein the surface element has a thickness T and that the distance between each structured roller is a specific value (Column 23, lines 47-50; Table 10). Although he does not specifically disclose that the distance between each structured roller and the corresponding counter stay is set in the range of T minus 0.5mm-1.2mm, he suggests that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to vary the gap between the two rolls in order to obtain a desired thickness of the final article (Column 25, lines 15-21, 31-32), meeting applicant's claim.

Regarding Claim 43, MacQueen shows the process as claimed as discussed in the rejection of Claims 1, 32, and 40 above, including a method wherein the surface element has a thickness T and that the distance between each structured roller is a specific value (Column 23, lines 47-50; Table 10). Although he does not specifically disclose that the distance between each structured roller and the corresponding counter stay is set in the range of T minus 0.7mm-1.2mm, he suggests that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to vary the gap between the two rolls in order to obtain a desired thickness of the final article (Column 25, lines 15-21, 31-32), meeting applicant's claim.

Regarding Claim 51, MacQueen shows the process as claimed as discussed in the rejection of Claims 1, 39, and 41 above, including a method wherein the surface element has a thickness T and that the distance between each structured roller is a specific value (Column 23, lines 47-50; Table 10). Although he does not specifically disclose that the distance between each structured roller and the corresponding counter stay is set in the range of T minus 0.7mm-0.9mm, he suggests that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to vary the gap between the two rolls in order to obtain a desired thickness of the final article (Column 25, lines 15-21, 31-32), meeting applicant's claim.

Regarding Claim 52, MacQueen shows the process as claimed as discussed in the rejection of Claims 1, 32, and 43 above, including a method wherein the surface element has a thickness T and that the distance between each structured roller is a specific value (Column 23, lines 47-50; Table 10). Although he does not specifically disclose that the distance between each structured roller and the corresponding counter stay is set in the range of T minus 0.7mm-0.9mm, he suggests that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to vary the gap between the two rolls in order to obtain a desired thickness of the final article (Column 25, lines 15-21, 31-32), meeting applicant's claim.

Claims 33-34, 45, 50, and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacQueen, in view of Petry (U.S. Patent 3,196,030).

Regarding Claim 33, MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 32 above, but he does not show operating the rolls at a specific

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temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the structured rollers are heated to a surface temperature (ST) above 40°C (Column 9, lines 46-48). Petry and MacQueen are combinable because they are concerned with a similar technical field, namely, methods of making a decorative article. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate MacQueen's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Regarding Claim 34, MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 32 above, but he does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the structured rollers are heated to a surface temperature (ST) above 30°C (Column 9, lines 46-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate MacQueen's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Regarding Claim 45, MacQueen shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the structured surface of the mold is heated to a surface temperature (ST) above 40°C (Column 9, lines 46-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate MacQueen's



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process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Regarding Claim 50, MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 30 above, but he does not show using a specific polymer. Petry shows that it is known to carry out a process for making a decorative article wherein the polymer of the base layer is polyurethane (Column 5, lines 3-8). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Petry's polymer in MacQueen's process in order to obtain an article useful in situations that are amenable to polyurethane.

Regarding Claim 56, MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 45 above, but he does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the temperature (ST) is in the range of 50-150°C (Column 9, lines 46-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate MacQueen's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Regarding Claim 57, MacQueen shows the process as claimed as discussed in the rejection of Claims 1, 32, and 33 above, but he does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the structured rollers are heated to a surface temperature (ST) is in the range of 50-150°C (Column 9, lines 46-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate

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MacQueen's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Regarding Claim 58, MacQueen shows the process as claimed as discussed in the rejection of Claims 1, 32, and 34 above, but he does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the rollers are heated to a surface temperature (ST) is in the range of 35-100°C (Column 9, lines 46-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate MacQueen's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Claims 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacQueen, in view of Eby et al. (U.S. Patent 5,961,903).

Regarding Claim 35, MacQueen shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show the application of an additional top coat applied to the article. Eby et al., hereafter "Eby," show that it is known to carry out a method of making an article with a surface structure, wherein a thin top coat is applied on top of the structured wear layer (Column 8, lines 28-31). Eby and MacQueen are combinable because they are concerned with a similar technical field, namely, methods which yield articles having a structured decorative surface. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use

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Eby's top coat during MacQueen's method in order to provide extra protection for the top wear layer.

Regarding Claim 36, MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 32 above, but he does not show the application of an additional top coat applied to the article. Eby shows that it is known to carry out a method of making an article with a surface structure, wherein a thin top coat is applied on top of the structured wear layer after the glazing stage (Column 8, lines 28-31). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Eby's top coat during MacQueen's method in order to provide extra protection for the top wear layer.

Regarding Claim 37, MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 32 above, but he does not show the application of an additional top coat applied to the article. Eby shows that it is known to carry out a method of making an article with a surface structure, wherein a thin top coat is applied on top of the structured wear layer before the glazing stage and that the top coat is partially cured before glazing (Column 7, lines 65-67; Column 8, lines 1-4). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Eby's top coat during MacQueen's method in order to provide extra protection for the top wear layer.

Regarding Claim 38, MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 35 above, but he does not show the application of an additional top coat applied to the article. Eby shows that it is known to carry out a method of making an article with a surface structure, wherein the top coat is comprised of acrylic

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(Column 11, lines 4-5; It is noted that the clause that follows “optionally” has been considered, but as this is an alternative limitation, it is not deemed necessary for the instant invention.). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Eby’s acrylic top coat during MacQueen’s method in order to provide extra protection for the top wear layer.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over MacQueen, in view of Nishimura et al. (U.S. Patent 4,216,251). MacQueen shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show the presence of an elastic component in his article. Nishimura et al., hereafter “Nishimura,” show that it is known in the prior art to carry out a method of making an article with a decorative surface, wherein the surface element contains a layer which is elastic at least before the complete curing, the elastic layer being the base layer (Column 1, lines 40-41). Nishimura and MacQueen are combinable because they are concerned with a similar technical field, namely, methods which yield decorative articles. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Nishimura’s elastic component in MacQueen’s process in order for the final product to be used in varying situations which require bending.

Claims 42 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacQueen, in view of Schmid et al. (U.S. Patent 5,804,116).

Regarding Claim 42, MacQueen shows the process as claimed as discussed in the rejection of Claims 1, 39, and 41 above, but he does not teach a specific pressure which is

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applied to the article. Schmid et al., hereafter "Schmid," show that it is known to carry out a method of making an article with a surface structure, wherein the pressure between each structured roller and its corresponding counters stay is 50-200 Bar (Column 9, lines 27-29). Schmid and MacQueen are combinable because they are concerned with a similar technical field, namely, molding processes which yield articles having a designed surface structure. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmid's pressure from MacQueen's rollers in order to produce the desired amount of compression of the article.

Regarding Claim 53, MacQueen shows the process as claimed as discussed in the rejection of Claims 1, 39, 41, and 42 above, but he does not teach a specific pressure which is applied to the article. Schmid shows that it is known to carry out a method of making an article with a surface structure, wherein the pressure is 65-100 Bar (Column 9, lines 27-29). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmid's pressure from MacQueen's rollers in order to produce the desired amount of compression of the article.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over MacQueen, in view of Greten et al. (U.S. Patent 5,498,309). MacQueen shows the process as claimed as discussed in the rejection of Claims 1, 32, 40, and 43 above, but he does not show a specific pressure which is applied to the article. Greten et al., hereafter "Greten," show that it is known to carry out a method of making an article with a surface structure, wherein the pressure is 0.1-10 Bar (Column 2, lines 7-8). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made

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to use Greten's pressure from MacQueen's rollers in order to produce the desired amount of compression of the article.

Claims 46 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacQueen and Petry, as applied to claims 1 and 45 above, further in view of Schmid.

Regarding Claim 46, MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 45 above, but he does not teach a specific pressure which is applied to the article. Schmid shows that it is known to carry out a method of making an article with a surface structure, wherein the pressure is 50-200 Bar (Column 9, lines 27-29). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmid's pressure from MacQueen's rollers in order to produce the desired amount of compression of the article.

Regarding Claim 55, MacQueen shows the process as claimed as discussed in the rejection of Claims 1, 45, and 46 above, but he does not teach a specific pressure which is applied to the article. Schmid shows that it is known to carry out a method of making an article with a surface structure, wherein the pressure is 65-100 Bar (Column 9, lines 27-29). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmid's pressure from MacQueen's rollers in order to produce the desired amount of compression of the article.

Claims 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacQueen, in view of James et al. (U.S. Patent 6,354,915).

Regarding Claims 47 and 48, MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 28 above, but he does not specify the identity of the hard particles in the wear layer. James et al., hereafter "James," show that it is known to carry out a method of making articles with specific surface structures, wherein (Claim 47) hard particles comprise silicon carbide (Column 3, lines 2-4), and (Claim 48) a part of the hard particles comprise silicon carbide, while another amount of the hard particles consist of diamond (Column 3, lines 2-4). James and MacQueen are combinable because they are concerned with a similar technical field, namely, molding processes which yield articles recognized for their surface structure. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use James' hard particles in MacQueen's molding process in order to yield an article useful in situations calling for those specific hard particles.

Regarding Claim 49, MacQueen shows the process as claimed as discussed in the rejection of Claims 1, 28, and 48 above, including a method wherein the hard particles have an average size range of 50nm-2um (Column 8, lines 41-48). He does not show the use of diamond particles. James shows that it is known to carry out a method of making articles with specific surface structures, wherein the hard particles consist of diamond and are placed close to the upper surface of the wear layer (Column 3, lines 2-4; Column 5, lines 59-61). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to place James' diamond particles close to the surface of MacQueen's formed article in order for them to be more visible and/or useful.

Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over MacQueen and Greten as applied to claim 44 above, and further in view of Schmid.

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MacQueen shows the process as claimed as discussed in the rejection of Claims 1 and 44 above, but he does not teach a specific pressure which is applied to the article. Schmid shows that it is known to carry out a method of making an article with a surface structure, wherein the pressure is 65-100 Bar (Column 9, lines 27-29). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmid's pressure from MacQueen's rollers in order to produce the desired amount of compression of the article.

### ***Response to Arguments***

Applicant's arguments, see the paper filed 13 May 2004, with respect to the rejection(s) of claim(s) 1 and 26-58 under Hansson have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of MacQueen.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with regard to forming decorative articles:

U.S. Patent 3,808,024 to Witman

U.S. Patent 4,318,950 to Takashi et al.

U.S. Patent 4,384,904 to Kauffman et al.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A Fontaine whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Maf  
August 5, 2004



**MICHAEL P. COLAIANNI**  
**SUPERVISORY PATENT EXAMINER**